

Application No. 09/875,192

- 4 -

February 28, 2005

IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) For a duplex communications network exchanging data packets with a plurality of subscriber stations, a communications interface for the subscriber stations comprising:

a communications port for connection to the network,

a modem having an address, coupled to the communications port,

a processor coupled to the modem, for processing data packets having identifier information relating the data packets to the address, the processor further comprising

a master communications interface mode in which the communications interface serves as a master communications interface for downloading data packets from the network and uploading data packets to the network, and

a slave communications interface mode in which the communications interface serves as a slave communications interface for downloading data packets from the network and uploading data packets to the master communications interface,

the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces, and

a supplementary communications link, for communicating with one or more other communications interfaces,

wherein when a plurality of communications interfaces are connected in parallel one of

Application No. 09/875,192

- 5 -

February 28, 2005

the plurality of communications interfaces is in master mode and the others of the plurality of communications interfaces are in slave mode, ~~the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces.~~

2. (original) The communications interface of claim 1 comprising a buffer for storing data during switching intervals.

3. (original) The communications interface of claim 1 wherein the supplementary communications link comprises twisted pair telephone wiring within a premises.

4. (original) The communications interface of claim 1 wherein the communications interface remains in master mode to relay to the network an upload demand from another communications interface which is below a threshold size or data rate.

5. (original) The communications interface of claim 1 wherein the processor is remotely configurable.

6. (original) The communications interface of claim 1 wherein the supplementary communications link communicates using Ethernet.

7. (currently amended) The communications interface of claim 6 wherein the supplementary communications link comprises an Home Phone Networking Alliance (HPNA) card.

8. (original) The communications interface of claim 5 wherein the modem is frequency agile.

9. (original) The communications interface of claim 1 wherein one or more of the others of the plurality of communications interfaces are fixed in slave mode.

10. (original) The communications interface of claim 1 wherein when switching from master mode to slave mode the priority queue is transferred from the communications interface to

Application No. 09/875,192

- 6 -

February 28, 2005

another communications interface.

11. (currently amended) A duplex communications network exchanging data packets with a plurality of subscriber stations, comprising

a plurality of communications interfaces for the subscriber stations, at least some of the communications interfaces comprising:

a communications port for connection to the network,

a modem having an address, coupled to the communications port,

a processor coupled to the modem, for processing data packets having identifier information relating the data packets to the address, the processor further comprising

a master communications interface mode in which the communications interface serves as a master communications interface for downloading data packets from the network and uploading data packets to the network, and

a slave communications interface mode in which the communications interface serves as a slave communications interface for downloading data packets from the network and uploading data packets to the master communications interface,

the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces, and

a supplementary communications link, for communicating with one or more other communications interfaces,

wherein when a plurality of communications interfaces are connected in parallel one of the plurality of communications interfaces is in master mode and the others of the plurality of

Application No. 09/875,192

- 7 -

February 28, 2005

~~communications interfaces are in slave mode, the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces.~~

12. (currently amended) The communications network of claim ~~1~~ 11 comprising a buffer for storing data during switching intervals.

13. (original) The communications network of claim 11 wherein the supplementary communications link comprises twisted pair telephone wiring within a premises.

14. (original) The communications network of claim 11 wherein a communications interface in master mode remains in master mode to relay to the network an upload demand from another communications interface which is below a threshold size or data rate.

15. (original) The communications network of claim 11 wherein the processor is remotely configurable.

16. (original) The communications network of claim 11 wherein the supplementary communications link communicates using Ethernet.

17. (original) The communications network of claim 16 wherein the supplementary communications link comprises an HPNA card.

18. (original) The communications interface of claim 15 wherein the modem is frequency agile.

19. (original) The communications network of claim 11 wherein one or more of the others of the plurality of communications interfaces are fixed in slave mode.

20. (original) The communications network of claim 11 wherein when switching from master mode to slave mode the priority queue is transferred from one communications interface to another communications interface.

Application No. 09/875,192

- 8 -

February 28, 2005

21. (currently amended) A method of communicating over a duplex communications network exchanging data packets over a subscriber line with communications interfaces at a plurality of subscriber stations, comprising the steps of:

- a. for each communications interface, assigning an address to a modem coupled to a communications port of each communications interface,
- b. routing to each respective communications interface data packets downloaded from the network having identifier information relating the data packets to the address,
- c. in a master communications interface mode, uploading data packets to the network over the subscriber line, ~~and~~
- d. in a slave communications interface mode, uploading data packets to a master communications interface over a supplementary communications link, and
- c. switching the communications interfaces between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces.

wherein when a plurality of communications interfaces are connected in parallel one of the plurality of communications interfaces is in master mode and the others of the plurality of communications interfaces are in slave mode, ~~the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces.~~

22. (original) The method of claim 21 comprising the step of storing upload data during switching intervals.

23. (original) The method of claim 21 wherein the supplementary communications link comprises twisted pair telephone wiring within a premises.

Application No. 09/875,192

- 9 -

February 28, 2005

24. (original) The method of claim 21 wherein a communications interface in master mode remains in master mode to relay to the network an upload demand from another communications interface which is below a threshold size or data rate.

25. (original) The method of claim 21 including the step of remotely configuring one or more communications interfaces.

26. (original) The method of claim 21 wherein the supplementary communications link communicates using Ethernet.

27. (original) The method of claim 26 wherein the supplementary communications link comprises an HPNA card.

28. (original) The method of claim 25 wherein the modem is frequency agile, and including the step of changing a frequency of the modem responsive to subscriber line conditions.

29. (original) The method of claim 21 wherein one or more of the others of the plurality of communications interfaces are fixed in slave mode.

30. (original) The method of claim 21 including the sub-step, when switching from master mode to slave mode, of transferring the priority queue from one communications interface to another communications interface.

Claims 31 - 45 (canceled)